

PROJECT NUMBER: 1756  
PROJECT TITLE : Analytical Sensory Correlations  
PROJECT LEADER: B. W. Good  
PERIOD COVERED: September 1985

## I. RL vs. RCB SMOKE

### A. TPM

Seven types of RL/RCB cigarettes were received from Duane Watson (RCB, RLTC, RL150B, and four Park 500 trial samples of RL-RCB) for characterization and comparison by multivariate analysis of TPM data. TPM components are being chromatographically analyzed by the modified fractionation method. Each sample is analyzed four times. The data, which is organized for BMDP analysis, contains intensity measurements of 289 TPM components (93 from the basic fraction, and 98 each from the acidic and neutral fractions. The data collection is near completion.

### B. Organic Gas Phase

The above cigarettes are also being analyzed for organic gas phase components by both flame ionization and nitrogen-specific detectors. The data, containing peak areas of 57 components and 20 nitrogen-containing compounds, is being organized for BMDP analysis. Each sample is analyzed three times.

## II. ORIENTAL TOBACCO

The analysis of eight volatile fatty acids in filler and TPM were completed for four grades of oriental tobaccos (YUP, TIW, BMU and GKU) and the DBC bright, burley and oriental smoked by the North Complex Smoking Panel. The average values from four replicates of each sample show a relative standard deviation of 5-10% in filler and 5-15% in TPM. The data, reduced to BMDP compatible format, indicated the general trend of the acid contents in filler and TPM to be YUP>TIW>DBC oriental>BMU>GKU. The differential is less in TPM. The TPM of DBC bright contains the highest levels of propionic, isobutyric, butyric and valeric acids in the group. The GKU contains the least amount of B-methylvaleric acid and YUP, the most. This data set, together with abienol and scleral data, will be analyzed by BMDP and correlated with subjective data, when available.

## III. LABSAM

### A. Online Handler

The on-line handler programs used to collect PE and OV data were modified to store interim information (tare and sample weights) in keyed rather than sequential files. This change speeds program execution and increases data validity. Similar changes are planned for the ash, HWS and solids programs.

### B. Leaf Department Reporting

Changes were made to the leaf department reporting program to include lot numbers for Richmond by product materials and to enhance output format. Plans include the incorporation of oriental and off shore tobaccos.

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